




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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,306	08/01/2003	Michael P. De Ronne	GP-301734	3692
7590 06/29/2004				
CHRISTOPHER DEVRIES		EXAMINER		
General Motors Corporation		LARKIN, DANIEL SEAN		
Legal Staff, Mail Code 482-C23-B21		ART UNIT		
P.O. Box 300		2856		
Detroit, MI 48265-3000		PAPER NUMBER		

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/632,306	Applicant(s) DE RONNE ET AL.	
	Examiner Daniel S. Larkin	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 16-18, 23 and 26 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9-15, 19-21, 24, 25 and 27-29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference numerals -- 22 --, --24 --, -- 26 --, and -- 28 --, as shown in Figure 1, do not appear within the written disclosure. Additionally, the "electrical lines" from sensors (24, 26, 28) to the controller are not disclosed as well.

2. The drawings are objected to because reference step (108) recites that the vent valve is closed after a "stabilization period", however, the written disclosure fails to disclose this feature.

3. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

Page 1, paragraph [0002], page line 8: A -- comma -- should be inserted prior to the term "such".

Page 3, paragraph [0015], page line 20: The phrase "not shown" should be deleted since reference numeral "34" is shown in Figure 1.

Page 4, paragraph [0019], page line 30: A -- comma -- should be inserted prior to the term "such".

Page 4, paragraph [0019], page line 31: A -- comma -- should be inserted after the term "minutes"; a -- comma -- should be inserted prior to the term "such"; and the term "It" should be deleted.

Page 5, paragraph [0019], page line 1: The term "mile" should be deleted.

Page 5, paragraph [0020], page lines 8 and 9: The disclosure recites that control closes the vent valve in reference step (108); however, the drawing presents that the vent valve is closed after a "stabilization period". The disclosure fails to provide any discussion of this stabilization period. Some correction of the drawing or the specification appears necessary.

Page 7, top of page: The term "CLAIMS" should be replaced with a phrase similar to -- What We Claim Is: -- or -- What Is Claimed Is: --. Appropriate correction is required.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification fails to provide antecedent basis for “filtering a vapor pressure signal”, as recited in claim 11 or “filtering a current vapor pressure, as recited in claim 22.

Claim Objections

6. Claims 19-22 are objected to because of the following informalities:

Re claim 19, claim line 3: A -- period -- should be inserted after the term “value”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 16-18, 23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,321,727 (Reddy et al.).

With respect to the limitations of claim 1, the reference to Reddy et al. discloses a leak detection system for a vehicle comprising a fuel system (10) and a controller (14) that initiates a vapor leak test, see description of Figure 2, that detects a fuel filling

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event, and that terminates the vapor leak test if a fuel filling event is detected, col. 6, lines 2-5.

With respect to the limitations of claim 2, the reference to Reddy et al. discloses a vent valve (72) and a process (step 208) whereby the controller (14) closes the vent valve after initiating the vapor leak test.

With respect to the limitation of claim 3, the reference states that the vapor pressure is monitored by the controller (14) to detect a fuel filling event, col. 6, lines 2-5.

With respect to the limitations of claim 16, the reference to Reddy et al. discloses a method of testing vacuum of a fuel system, comprising detecting a key-off event (200); initiating a vapor leak test (206, PHASE 1) if a pre-condition is present (200); generating a current vapor pressure signal for the fuel system (210, 214, 216), col. 7, lines 24-39; monitoring a fuel level of a fuel tank of the fuel system to determine if the test should commence, col. 5, lines 66-67 through col. 6, lines 1-2 and col. 9-10, claim 1, claim lines 24-27; and terminating the vapor leak test if the vapor pressure signal detects a potential fuel filling event, col. 6, lines 2-5. The reference also discloses that in a more sophisticated embodiment, pressure data, fuel level data, and other parameters are subjected to numerical analysis to provide more extensive information concerning a leak, col. 8, lines 1-5.

With respect to the limitation of claim 17, the reference to Reddy et al. discloses that the fuel system is sealed through closing of a canister vent valve (72).

With respect to the limitation of claim 18, the reference to Reddy et al. discloses that after terminating the vapor leak test, the fuel system is unsealed (step 212 or step 218).

With respect to the limitation of claim 23, the reference to Reddy et al. discloses that if a time period has expired (step 216), then the testing sequence proceeds to an end of test step (step 218).

With respect to the limitations of claim 26, the reference to Reddy et al. discloses a method of testing vacuum of a fuel system which detects a fuel filling event comprising generating a vapor pressure signal for the fuel system; and monitoring the fuel level of the fuel system to determine if the test should commence, col. 5, lines 66-67 through col. 6, lines 1-2 and col. 9-10, claim 1, claim lines 24-27; and terminating the vapor leak test if the vapor pressure signal detects a potential fuel filling event, col. 6, lines 2-5. The reference also discloses that in a more sophisticated embodiment, pressure data, fuel level data, and other parameters are subjected to numerical analysis to provide more extensive information concerning a leak, col. 8, lines 1-5.

9. Claims 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,295,472 (Otsuka et al.).

With respect to the limitations of claim 6, the reference to Otsuka et al. discloses an apparatus for detecting malfunction in evaporated fuel purge systems, whereby the reference discloses initiating a malfunction test whereby vapor pressure is collected. The reference discloses, with respect to Figure 4B, that a purge valve (38) is closed and

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a first pressure value (P_{s2}) is stored (step 117) in the computer when a secondary malfunction detection process has started. After a period of time has elapsed, a second pressure value (P_{e2}) is stored (step 121). A comparison step (step 122) is performed to determine if the rate of pressure change $(P_{e2} - P_{s2})/Y$ is greater than a predetermined reference value $R2$. If the rate of pressure change is greater than the predetermined reference value, then a warning signal is generated to indicate a malfunction in the system and the test terminates. The malfunction may be caused by a leak in the system, col. 11, lines 20-22.

With respect to the limitation of claim 7, the reference to Otsuka et al. discloses that the secondary malfunction process begins with the purge valve (38) and the canister valve (36) both closed, thus enclosing the system, col. 10, lines 29-32.

With respect to the limitation of claim 8, the reference to Otsuka et al. discloses that the canister valve (36) is opened (step 126) if a malfunction is not detected, which would imply that the testing sequence/process is terminated.

Allowable Subject Matter

10. Claims 4, 5, 9-15, 19-22, 24, 25, and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art to US 6,363,921 (Cook et al.) discloses a vacuum leak verification system that terminates a testing sequence if a controller detects a pressure spike due to a refueling of the fuel tank.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin
Au 2856
25 June 2004



DANIEL S. LARKIN
PRIMARY EXAMINER